



## Health and safety fare

From left, Acquenetta Davis of Nursefinders pricks a patient's finger to test her cholesterol at Wednesday's Environment, Safety and Health Fair. The fair, sponsored by the Lab and Sandia, included environment and safety demonstrations, health screenings and fitness performance tests.

More photos, see page 5.



JACQUELINE MCBRIDE/NEWSLINE

## Russ Miller reorganizes Lab Security Department to provide better service

By David Schwoegler

NEWSLINE STAFF WRITER

Citing "significant events, numerous inquiries, increased oversight, and changes in management positions," Department Head Russ Miller decided he had a "prime opportunity to take a fresh look at the Security Department from a functional and service-provider perspective."

Earlier this year, Miller had asked an internal cross-disciplinary team of employees to study how the department delivers its services, and recommend how to improve efficiency and service, not only to the programs, but also to the Laboratory population as a whole.

"I've carefully considered the recommendations, as well as other important elements. Then I consulted with our security management team before realigning

SECURITY, page 7



## Lab's 'Thunder' steals second place on Top500 supercomputing list

By Bob Hirschfeld

NEWSLINE STAFF WRITER

LLNL's newest supercomputer, named "Thunder" has made an impressive debut as No. 2 on the prestigious "Top500" list of the world's fastest computers.

Thunder, a non-classified system, is located in Bldg. 451, adjacent to ASC/White, which, when it went online four years ago in June 2000, took the top position on the list. With the advent of newer supercomputers, ASC/White is now listed as 13 on the list.

Configured with 4,096 Intel Itanium 2 processors, Thunder is rated with a peak speed of 23 teraflops (trillion operations per second) and achieved 19.94 teraflops on the LINPACK benchmark.

Thunder, a Linux cluster that runs an open source software environment developed and maintained at the Laboratory called CHAOS (Clustered High Availability Operating System), was designed primarily for scientific research in such areas as materials science, energy and environment, including seismology and atmos-

pheric and climate studies, biology, structural mechanics and cosmology. Most of these studies have either a direct or indirect bearing on the Laboratory's national security missions.

It took about eight months from the original consideration of the system late last year, to actual installation and early "Science Run" status at the Lab. Computation Directorate Deputy Associate Director Michel

THUNDER, page 7

## Shedding light on dark energy, DDLS speaker Michael Turner expands on speeding cosmos

By Charles Osolin

NEWSLINE STAFF WRITER

Like blind people trying to describe an elephant, cosmologists trying to explain the accelerating expansion of the universe are literally groping in the dark, according to one of the field's leading theorists.

"Dark energy (the mysterious force that may be causing the cosmic speedup) may be the most profound problem in all of science today," Michael Turner, professor of astronomy and astrophysics at the University of Chicago, told a packed house at the Lab's Bldg. 123

DDLS, page 7

## Promoting security

"Stars of Stripes" are newly sworn Protective Force Division sergeants. From left: Capt. John Smalls, master of ceremonies and Sgts. Mark Glenn Dufour, Brian Keith Cudmore, Joshua Brian Chance, Michael Doran, Michael Wayne Adams (and spouse) and Hai Thanh Do Mckinney. See story, page 2.



BOB HIRSCHFELD/NEWSLINE



**A Laboratory Community Champion**  
— Page 3



**Honors for Lab blood drive**  
— Page 8



**Much more than a lake**  
— Page 8



## LAB COMMUNITY NEWS

### Weekly Calendar

Technical Meeting Calendar, page 4

Saturday  
**26**

The American Cancer Society's 24-hour **Relay for Life** will take place beginning today at 10 a.m. and will end at 10 a.m. Sunday at the Livermore High School Track.

Relay For Life is a family-oriented team event where participants can walk or run relay-style around the track and take part in fun activities off the track. Cancer survivors are invited to begin the event by walking the first lap. Survivor registration begins at 9 a.m. The public is also invited to attend the Luminaria Ceremony, which will take place at 9 p.m. to honor the community's cancer survivors and to commemorate those lost to the disease. To volunteer for the relay, call Karen Crowson at 453-3420.

...

The Vaqueros Del Mar Dive Club **25th Annual Seafood Festival and Photographic Print Auction** will take place tonight from 6-10 p.m. at the Livermore Rod & Gun Club, 4000 Dagnino Road. Tickets are \$25. For more information or tickets, contact Rita Monser, 321-2076, Doug Bammann, 294-2585, or Mark Rotter, 422-8370.

Wednesday  
**30**

The Benefits Office will continue the **brown-bag series** on how to enhance your financial security by participating in the Tax-Deferred 403(b). Due to the Fourth of July holiday, the next session will be held today from 12:15 - 1:15 p.m. in Bldg. 571, conference room 1301. Attendance is open and no pre-registration is required. Bring your lunch and your questions. For additional information about benefit services or events, see the Website at [www.llnl.gov/llnl/02employment/benefits/seminars.htm](http://www.llnl.gov/llnl/02employment/benefits/seminars.htm).

UP  
&  
COMING

Employees are invited to celebrate 50 years of employee services with food, fun and prizes on Thursday, July 15, from 11:30 a.m.-1 p.m. in the picnic area near Bldg. 317. The **LLESA picnic** will feature a trivia contest, free chair massage, baseball speed throw and a barbecue lunch, catered by the LLL Armed Forces Veterans Association. Special anniversary drawings including an iBook and iPods will be given away. Register for the drawings by July 7.

### BROADCAST SCHEDULE

#### LAB TV

Michael S. Turner's talk, "**Cosmic Acceleration: New Gravitational Physics or Mysterious Dark Energy**," that took place Monday as part of Director's Distinguished Lecturer Series will be rebroadcast on Lab Channel 2, at 10 a.m., noon, 2, 4 and 8 p.m. on Thursday, July 1, and at 4 a.m. Friday, July 2.

## Six officers promoted to sergeant

Six uniformed officers snapped to attention shortly after 2 p.m. Monday and a dozen fresh chevrons shared the spotlight, as the Protective Force Division promoted six security police officers to the rank of sergeant.

Among the new sergeants were five PSO/3s, Michael Adams, Joshua Chance, Brian Cudmore, Michael Doran, and Mark Dufour, who will supervise members of the Special Response Team and one PSO/2 Hai Thanh Do McKinney.

The protracted promotion process began nearly three months ago with the formation of a selection committee comprised of a cross section of supervisors and managers within the Safeguards and Security Organization. Candidates underwent

primary and secondary interviews, while the committee evaluated their seniority and experience, performance records, as well as job qualifications.

There were two major drivers behind creating the six new supervisors: This is a major step in the move to a "squad concept" within the PFD organization; and security police officer staffing has increased within the division.

"This is the first time that we've had a sergeants' promotion ceremony and it won't be the last," said PFD Capt. John Smalls, liaison between the SuperBlock and the Protective Force Division. Smalls also served as master of ceremonies for the event, which took place in the Bldg. 361 auditorium.

## New contract offers discounted fares for travelers

California recently announced the structure of a renewed YCAL airfare contract that takes effect July 1. The YCAL airfare program provides state, University of California and LLNL travelers on official business with cost effective air travel through negotiated airfares that are unrestricted and allow for last seat availability with no increase in price.

The last YCAL contract offered negotiated fares with two airlines and 263 city pairs. This year, California has greatly expanded the program to include contracts with five airlines (America West, American, Delta, Southwest and United) and more than 400 city pairs to include international routes frequented by LLNL travelers.

One noteworthy change in the domestic program concerns service between the Bay Area and Washington D.C. United will no longer offer YCAL rates to Washington D.C., as America West was selected by the state to be the YCAL air carrier for this market. California selects the lowest bidder for each city pair. For some Laboratory travelers, the America West schedule for flights to/from Washington D.C. may not meet their business needs. In these cases, Carlson Wagonlit Travel will work with the traveler to identify a reasonable alternative. In addition, LLNL Travel Services is actively working with United Airlines to establish a

LLNL discounted rate for direct service to/from Washington D.C. and other key cities to augment the YCAL program. We anticipate the contract with United will be in place by the beginning of FY05.

The following are some of the highlights of the new YCAL program:

- Within California, United, American and Southwest airlines will offer discounted rates for business travel.
- United, American, Southwest, Delta and America West will offer domestic, out-of-state discount rates.
- International destinations have been added with service provided by United, Delta, American and America West. Although Beijing is no longer included in the program, a number of destinations have been added including Moscow, Athens, Calgary, Dubai, Geneva, Madrid, Montreal, Sidney, Toronto and Zurich.
- The new rates have been sent to Carlson Wagonlit Travel and they are programming them into its reservation system and eZtrip (LLNL's online booking tool). You can still make your reservation in eZtrip, just add a note to hold ticketing for the new YCAL fare, which will be loaded in the system by July 1.

A listing of new rates and cities will be posted soon on the LLNL Travel Web page.

## Former Lab physicist to discuss insider's history of the Cold War

Former Lab physicist and Secretary of the Air Force Thomas Reed will discuss his new book, "At the Abyss: An Insider's History of the Cold War," on July 6 in Pleasanton.

Reed, who also served as special assistant to President Reagan for National Security Policy, will speak at the Pleasanton Veterans' Building, 301 Main St., at 7 p.m.

Following his talk, there will be a question-and-answer period, refreshments and a time for book signing. Books will be available for purchase

at the event.

Reed's talk is sponsored by Air Force Association Chapter 120, American Legion Posts 237 and 333, VFW Post 6298, the Tri-Valley Council of American Veterans Coalition and Towne Center Book Store.

For more information, contact Robert Frank, president of the Air Force Association Chapter 120, at (925) 846-1970 or [BobFrank@VeteransCenter.Net](mailto:BobFrank@VeteransCenter.Net).

### Fifth Street temp stop signs to be removed effective July 6

Effective Tuesday, July 6, all "temporary" stop signs along Fifth Street at the Avenue A and Avenue B intersections will be removed, and Fifth Street will become an east/west through-street between West Perimeter Drive and West Inner Loop.

Motorists driving in the north/south directions on Avenue A and Avenue B must continue to stop at Fifth Street, as directed by traffic signs. The "temporary" stop signs along Fifth Street have been in place for approximately three months, creating four-way stops to help employees transition from stopping in the east/west direction, to stopping in the north/south direction.

## Newsline

Newsline is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

### Contacts:

Media & Communications manager: Lynda Seaver, 3-3103

Newsline editor: Don Johnston, 3-4902

Contributing writers: David Gilbert, 296-5643; Bob Hirschfeld, 2-2379; Charles Osolin, 2-8367; David Schwoegler, 2-6900; Anne M. Stark, 2-9799; Stephen Wampler, 3-3107. For an extended list of Lab beats and contacts, see <http://www.llnl.gov/llnl/06news/NewsMedia/contact.html>

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Telephone: (925) 422-4599; Fax: (925) 422-9291

e-mail: [newsline@llnl.gov](mailto:newsline@llnl.gov) or [newsonline@llnl.gov](mailto:newsonline@llnl.gov)

Web site: <http://www.llnl.gov/PAO/>

## AROUND THE LAB



# Costella energizes grassroots cancer awareness effort

By Don Johnston  
NEWSLINE STAFF WRITER

“Creating change from within” has been Mark Costella’s guiding philosophy in spearheading the annual Cancer Awareness Campaign as well as his work as a champion of diversity causes.

Costella was the driving force behind the creation of the “grass roots” Cancer Awareness Campaign four years ago, a campaign that now serves as a focal point for a broad range of awareness and prevention activities that take place year around at the Lab and in the community.

“What makes the campaign unique is that it is an employee driven effort. We solicit the support of Lab directorates and organizations but it remains grass roots,” Costella said. “This is important because cancer awareness issues cross all directorates and organizations. Cancer is a non-discriminator. Age, sexual orientation and social class don’t matter.”

Because the campaign is not sponsored by a single organization, it serves as a “collective umbrella” for creating partnerships both inside the Lab and out — with Sandia, for example.

Now in its fourth year, the Lab’s campaign has “blossomed” to become a model held up by the American Cancer Society for other organizations, such as Intel, to follow.

“We’ve been told that the Laboratory has the most integrated cancer awareness program of any organization the cancer society works with,” said Costella, who is again chairing the cancer awareness campaign.

Since its foundation the campaign has taken on a life of its own thanks to the tireless effort of a core committee representing a broad range of networking groups and Lab organizations, including the Health Services Department.

“Every year Mark puts a lot of energy into pulling people from all over the Lab together to work on the campaign,” said Phil Arzino, Health Services Health Promotion manager.



FILE PHOTO

Mark Costella, during the 2003 Cancer Awareness Campaign Survivors and Memorial Walk.

screening, prevention, coping and caregiving, according to Arzino.

“The campaign doesn’t take a lot of money, but it does take a commitment of time and energy for those who have dedicated themselves to this effort,” Costella said. “In the month before the campaign, volunteers give up their lunch hour and work evenings to organize activities.”

He was inspired to start the Lab campaign by a desire to “give back to the Laboratory” and because he knew so many people whose lives had been touched by cancer. “Cancer should concern everyone,” Costella said. “I’ve read that one in two men and one in three women will be touched by cancer at some point in their lives. Those are significant numbers.”

Awareness and prevention campaigns have also clearly been shown to work, he says, citing a Lab study showing a lower cancer rate for employees than in the surrounding population. “Hopefully our campaign will help the cancer rate continue to go down,” he said.

Costella has been gratified to see the campaign bring together disparate groups and organizations in the battle against cancer including scientists whose research relates to cancer — PEREGRINE, for example, and Biology and Biotechnology Research Program’s work on food mutagens.

In addition to the cancer campaign, Costella has served as a force for change as a leader of the LGBTA. He is the Lab’s representative for the University of California LGBTA and the UC Office of the President.

“We’ve created change through the UC policy,” he said.

Through his work with the LGBTA and the Cancer Awareness Campaign, Costella seeks to help create a unifying environment that improves everyone’s quality of life.

“The campaign is an incredible statement about what people will do. It has been a revelation to me,” he said. “The bottom line for us is that if we can help just one person live a better healthier life, it is all worthwhile.”

## Community CHAMPIONS

“He’s a very strong motivator. Mark is the right person to lead this effort.”

The campaign has provided opportunities for many people to attend presentations and receive health education hand-outs on cancer

## Cancer Awareness Campaign 2004 kicks off

The Lab’s 2004 Cancer Awareness Campaign kicks off this month and runs through July 27.

Lab and Sandia employees have joined together in an effort to raise awareness of the significant impact cancer has on everyone’s lives. The primary goals are to develop awareness of cancer-related issues for specific community, support groups and organizations onsite and cancer-related research conducted at the Lab.

- **“A Crooked Smile: Overcoming Obstacles with Grace and Humor,”** by Terri Tate will be held at noon Tuesday, June 29, in the Bldg. 361 auditorium. Tate is a down-to-earth inspirational teacher and registered nurse. As a two-time survivor of near fatal bouts with oral cancer, Tate has a unique brand of humor that shines light into these dark places.

- **“Complementary Medicine and the role of Spirituality in Healthcare,”** by Dr. John Astin will take place at noon on Wednesday, July 7, in the Bldg. 543 auditorium. Astin received his Ph.D. in Health Psychology and was a research fellow in the Complementary and Alternative Medicine Program at Stanford University School of Medicine. Astin will share his research involving mind-body therapies, meditation and the role of spirituality to treat cancer and other health problems.

- **The 30-minute survivor and memorial walk** will begin at 12:15 p.m. on Tuesday, July 13, on the south lawn of Bldg. 361. The cancer survivors and memorial walk is to

honor those who have passed away as a result of cancer and to celebrate the lives of those who have survived.

- **“Stamp Out Breast Cancer,”** by Dr. Ernie Bodie will be held at noon Wednesday, July 21, in the Bldg. 123 auditorium. Bodie, a prostate cancer survivor, is the director of Breast Surgical Services at Kaiser Permanente and founder of the Breast Cancer Research postage stamp, which has so far raised more than \$35 million for breast cancer research.

- **“Survivors and Caregivers”** at 12:15 p.m. on Tuesday, July 27, will feature a panel of Lab and Sandia survivors and the loved ones who provided care and support for them who will share the vital role caregivers play.

If you would like a copy of the mounted 2-foot-by-3-foot poster for your lobby, associate director office or auditorium, contact Mark Costella, 2-8999, or Cathy Kaplan, 3-6555.

Site-wide mailers will be sent early next week along with more *Newsline* and *News-Online* articles.

As with the past three campaigns, organizers are looking to involve all of the directorates and employee networking groups in sponsoring one of the events. Directorates are also being asked to help defray some of the nominal event cost with financial contributions. Typical contributions the past years have ranged from \$1,000 to \$1,500 per directorate. If your organization is willing to sponsor one of the events and/or assist with a financial contribution, contact Mark Costella, 2-8999, or Cathy Kaplan, 3-6555.



## NEWS YOU CAN USE



### Having a ball

Laboratory and Sandia postdocs from all directorates and their families joined together June 4 at Del Valle Regional Park for a summer picnic. The Postdoc Networking Group aims to give postdocs a chance to meet others outside of their normal work areas and provide the opportunity for collaborations between postdocs in different divisions and directorates. For more information on the group, go to <http://step.llnl.gov/postdoc/>



## Summer Student Calendar



Go to the Lab's Student Bulletin Board at <http://education.llnl.gov/sbb/> for details about seminars, panel discussions, tours, and other activities. Register for events online.

### Events taking place during the week of June 28:

Monday  
**28**

"How To Get Into Graduate School," by Beatrice Lopez-Flores and Melten Elol, UC Berkeley. 12-3 p.m., Bldg. 481, NIF auditorium. This is a comprehensive seminar open to all LLNL and Sandia summer scholars.

Learn from A-Z what it takes to get into

graduate school, from the application process to personal statements and letters of recommendation. Requirements for both engineering and non-engineering graduate programs will be covered.

Bring your own brown bag lunch. Refreshments and drinks will be provided. Contact: Connie Oakley, 3-0704. Register at the LLNL Student Bulletin Board at <http://education.llnl.gov/sbb/>. This seminar is also being offered on Tuesday, July 27, at Sandia Laboratory.

Wednesday  
**30**

### ICMT Seminar

"Overview of Research Activities in the Center for Applied Scientific Computing," by Pete Eltgroth,

Center for Applied Scientific Computing (CASC). 1:30 p.m., Bldg. 219, room 163. Contact: Paula Ashley, 3-3691.

July  
**1**

### Security Seminar

"Internet Ballistics," by Tony Bartoletti, CAR-NAI Computing Applications Division. 1:30 p.m., Bldg. 219, room 163. Contact:

Paula Ashley, 3-3691.

Please send your summer student calendar items to [lucchetti1@llnl.gov](mailto:lucchetti1@llnl.gov)

## Technical Meeting Calendar

Monday  
**28**

### BIOSECURITY & NANOSCIENCES LABORATORY

"Severe Acute Respiratory Syndrome 2003: Molecular

Diagnostics and the California Unexplained Pneumonia Project," by Jill K. Hacker, California Department of Health Services. 2 p.m., Bldg. 151, room 1209 Stevenson Room. Contact: Maurice Pitesky, 3-7684, or Josie Morgado, 2-7181.

Tuesday  
**29**

### COMPUTATION/LC: MPI TOPICS COLLOQUIUM

"Open MPI," by Rich Graham, Los Alamos National

Laboratory. 10 a.m., Bldg 113, room 1104 (von Neumann Room). Building access requires L or Q badge. The talk is unclassified. Contact: Terry Jones, 3-9834, [trj@llnl.gov](mailto:trj@llnl.gov).

July  
**1**

### CHEMICAL BIOLOGY & NUCLEAR SCIENCE DIVISION/CHEMISTRY & MATERIALS SCIENCE

"The SINE RNA Stress Response, and ALU RNA Activity," by interviewee Rich Kimura, UC Davis. 2 p.m., Bldg. 154, room 1013. Foreign nationals may attend if appropriate security plan is on file, which includes Bldg. 154. Contact: Julio Camarero, 2-6807, or Eryn Davis, 2-0475

July  
**12**

### CHEMISTRY & MATERIAL SCIENCE/MATERIALS SCIENCES & TECHNOLOGY DIVISION

"Oxide/Semiconductor Integration for Electronics Applications," by applicant Rhett T. Brewer, Rutgers University. 10 a.m., Bldg. 151, Stevenson Room 1209. Contact: Wayne King, 3-6547, or Rebecca Browning, 2-5500.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.



# Playing it safe

Photos by Jacqueline McBride  
Newsline



## Coming soon

Check your mailboxes next week for *The Employee's Guide* — your information resource to the Laboratory. Inside the guide you will find useful information about the Laboratory's operations, services and amenities.



**The Employee's Guide** was developed in response to the Lab's Employee Assessment Survey in 2001 and subsequent Survey Action Teams.

For a number of years, the Laboratory has devoted considerable effort to enhance the work environment. This guide is designed to keep employees aware of the tools, amenities, support and services available to enhance career, work and life success and provide easy ways to put those services to use.

It is important to remember that because the Lab is constantly changing, the *Employee's Guide* is a work in progress. Updates and improvements will be provided on a regular basis. To further increase the guide's utility, a Web-based version will be available next week at [empguide.llnl.gov](http://empguide.llnl.gov)

General questions or comments should be directed to the Worklife Programs Office at 2-9543 or [employeeguide@llnl.gov](mailto:employeeguide@llnl.gov)



Upper left: Steve Creel of the California Highway Patrol uses a rotating car cab with crash test dummies to demonstrate the hazards associated with rollovers. When the dummies wore seatbelts, they remained in the car. With no seatbelts, the crash dummies were ejected.

Bottom left: Alameda County Sheriff's Department Rescue volunteers with search dogs discuss how the canines are used in search and rescue missions.

Upper right: Cathy McClain Kaplan, aka Polly Polyp, promotes the Lab's 2004 Cancer Awareness Campaign.

Bottom right: Rene Ford (right) of Kaiser Permanente hands out sunscreen to Sandia employee Barbara Lohf during the 2004 Environment, Safety and Health Fair.



### AUTOMOBILES

1991 - Mazda MPV, 135K mi, 6 cyl, all power options, well maintained, great commute & family car, original owner - \$2800.00 415-543-3643

2000 - TOYOTA 4RUNNER SR5 4WD with 49K miles, very clean and Loaded, Blue/Grey cloth, TowPkg/CD/MoonRF/RunBrds \$17,500 OBO 925-548-3181

2002 - GMC Envoy, 42K miles, black on black. Loaded: leather, sun roof, running boards, Flow Master exhaust system. Excellent condition. \$22K 510-861-1054

2001 - Ford Focus ZX3 hatchback - green. 62k miles. Very good condition. 31mpg - extended warranty. \$6500 obo. No longer needed - retiring! 209-847-8264

1996 - Chevy Corvette silver, great condition. Black leather interior, two matching tops, rear tinted window. 86k miles. \$20k or OBO 510-793-7334

1996 - Jeep Grand Cherokee, V8, 4 Wheel Drive. Ski racks, AC/CD player, 115,000 miles, Gold/Brown color, Gray fabric interior. \$5000 O.B.O. 925-634-7362

1984 - TOYOTA Camry, brown, 155K miles. Runs strong. good engine. Needs some front suspension work. Stockton area. \$500 obo. 209-662-4034

1995 - Acura Legend LS-4D 133K mi,V6 3.2L,a/c,Power everything,Multi-CD Bose Stereo,ABS,Leather, Moonroof,heated seats \$8500 contact JENET 925-447-2466

1997 - El Dorado-Beautiful. Got to see to appreciate excellent condition. Low miles, alarm, superior sound system. \$11,000.00 OBO 510-582-2938

1993 - Merc Villager LS, loaded, great condition, \$3,500. 925-484-0697

2000 - Camaro SS 28K blk/blk lthr ttop fully loaded upgraded Bilstein susp/exhaust system xcondition \$20K obo 510-861-1054

1986 - Mercedes Benz 560SL, smoked silver, 33k mi, hard and soft tops, excellent and original condition, \$23k. 925-462-7736

1988 - MERCEDES-BENZ,300E,Clean,Black Beauty,6-cyl.,3.0,auto,tint,leather, cd,sunroof, prem.wheel,loaded,spoiler pkg.\$5,000.OBO 209-529-0431

1993 - Range Rover Classic, LWB, Green with Brown leather. Air suspension, full time 4 wheel drive, 1 owner, 67k, needs new A/C compressor, \$6500 916-798-5825

1996 - MPV Mazda Mini Van, Good Condition. Runs Great. ps,pb,pw,cruise,A/M,F/M cass.tow pkg. 101,000 highway miles. 4900.00 OBO 209-983-8372

1987 - HONDA ACCORD LX87, 4door, automatic, 168K, re-built engine, new alternator, new brakes, new CD stereo/speakers, good running condition. \$1800 OBO. 925-339-3022

1999 - Lincoln Town Car (Executive). \$73K mi. Excellent Condition. \$11,000 209-835-5075

2001 - Buick LeSabre. 68000 miles. V6 3.8i. silver/blue exterior.Excellent condition. CDI/A.C, Cruise, Dual Airbags. New brakes. Clean title. 13k 925-980-3217

1994 - BMW 740i, Dark Green, Excellent Cond., New Tires, Chrome Rims, 6-CD Changer. \$9,900 OBO 925-367-3595

### AUTOMOBILE ACCESSORIES

Top Deck Tonneau Cover, fits full size pickup, short box, Pewter color, \$500. 209-838-3279

131 TIRES. 2 Michelin 185/70/13 Radial tires, good condition only \$20 both. Livermore 925-447-7070

2 Weather gaurd side boxes 61 L 14 W 17D locking 40\$ 925-337-0057

### BICYCLES

Ladies bike and mens bike, make offer. See at 1163 Hillcrest Court, Livermore or call 925-447-3967

### BOATS

Luna Seaward 16 foot Fiberglass Kayak, weighs 52 lbs., baby blue and white with yellow accents, very good condition, \$1,500.00 925-961-1188

FUN!!! Tow behind your boat - Full throttle cov-

ered inner tube & Ski Rocket plus tow rope. All for \$100 obo. 925-634-9976

### CAMERAS

Camera and dark room equipment, Mamiya M645-1000S, Rollei TLR, Zone VI 4x5 Field Camera, meters Sekonic, Pentax, Enlarger, etc. Reasonable offers! 925-443-9599

### ELECTRONIC EQUIPMENT

COMPUTER--Mac LC with Personal Laserwriter, monitor, keybd, mouse. \$100. 510-522-3353

Onkyo hi-end turntable, great condition with cartridge \$100 415-543-3643

13 inch TV/VCR combo. No remote. Good condition perfect for RV or garage. \$25 obo. 925-606-5509

COMPAQ Presario Laptop 333MHz CD 2 HD WIN 95 1 Battery \$250 OBO 925-447-2697

Pioneer speakers CS99A good cond \$100pr. Sansui turn table needs belt \$45/offer 925-373-1522.

50-inch big screen Hitachi, Ultra-vision Projection TV Monitor, oak finish in excellent condition. \$1,000 OBO. Excellent condition. 925-292-1084.

### GIVEAWAY

Air Hockey Table; Works; On-Off Switch needs repair; 925-337-1088

Engine--1951 English Ford, 4 cyl, 6 volt, overhauled. You haul 925-443-2140

Good Condition Spa: 1990 Dimension One, 8x8, fiberglass shell, ozone filtration, gas heater, above/below ground. You haul. 925-443-6550

Free! King size mattress and box springs. U-hall. San Ramon, moving this weekend. 925-408-5537

Sturdy formica clad table, 5 ft x 2 1/2 ft, w/lamp. Double wheelchair ramp for van. Door blank, solid, 30 in x 6 ft. 925-447-5221

Grandfather clock, good condition, tells time but does not chime. You haul Livermore 925-960-9946

Fire wood, pine, about a cord, drying for 2 years, you haul. 925-625-4060

### HOUSEHOLD

Two beds for sale. 1 single hospital bed with metal frame (\$50), 1 queen size bed with frame (\$85) 415-543-3643

Oak Entertainment center. 5 X 6. Dual back lights, smoke glass doors, stereo shelves. Holds a 33 inch TV. asking \$250 OBO. Will deliver. 925-443-4844

Garage Sale Friday July 2, 1057 Mission Ridge Drive, Manteca, Childrens clothes, toys, household items. 925-846-3548

Amana refrigerator, bought 5-yrs (actual use 2 years),good working condition, \$200 or BO. 925-449-1957

Kitchen-Aid Washer & Dryer, top of the line, in perfect working condition. You move it, \$200. 925-449-0559

Emerson microwave. Very good condition. Hardly used. 25.00 510-537-7222

1 yr. old Kitchen Magic White Microwave. Perfect condition. \$25. 925-606-5509

MEDICAL BED:Single,automatic head and leg lift w/remote control,mattress and side rail avail. 209-529-0431

Dining Table w/Chairs \$275. 925-449-1481

Five Dwarf Agapanthus 1gal pots, \$15 take all, white flowers. 925-447-6192

MOVING: GE Elec. Dryer 2mos. old \$175.00, WhirlPool Supreme Washer 2yr. old \$175.00 Whirlpool Fridge \$75.00 9yr. old 925-828-3816

Futon, full size, black wood frame, 2 piece mattress black with purple cover, good condition used in spare room. \$100 209-823-8767

1950s OKeefe and Merrit gas stove, 35 inches wide, new chrome, 4 burners with griddle. Works good. \$1500 OBO. 209-538-4475

Wrought Iron Window Grill. No welds. 38 x 80. Mediterranean Style Interesting pattern. \$350 obo. 925-449-3737

## Newsline and classified ads

Current and past issues of *Newsline* are available from the *Newsline* archive on the Web. The latest edition of *Newsline* is usually posted on the Web the afternoon of the Friday it appears. To access the archive: <http://www.llnl.gov/lnl/06news/employee.html>

*Newsline* also is available in the publication alcove at the front of the new Livermore Public Library in the Civic Center. The latest editions are delivered to the library at the close of business Friday.

1 yr old top of line Maytag electric dryer, \$150.00, new home has gas dryer 925-961-1188

Oak dining room table - round pedestal type with four leaves. 4 matching chairs. \$275. 925-455-9855

Flour Mill- Magic mill II, electric, portable, stainless steel base. \$70.00 408-267-4304

Several Thomas Kinkadee paintings with certs, best offer, Sundae 209-324-1961

Sectional, 7-piece modular, tan, 2-ends and 2-45 degree turns, Ex. cond., \$400 925-443-8585

Decorative wrought iron shelf unit for indoor/outdoor use. Display pictures, plants, etc. Approx. 36 in. high. Very attractive. Digital pic avail. \$20 925-455-4208

CENTURY car seat, SmartMove XT, in excellent condition, for 20-40 lbs, navy blue, call after 6 pm 925-455-4947

### LOST & FOUND

Found - Cat glass holder with prescription glasses inside by T4177. Please page at 07121 to claim. 510-555-1212

### MISCELLANEOUS

Craftsman orbital sander (\$20), heavy duty multi-speed scoll saw (\$30), new carbide adjustable dado (\$25) 415-543-3643

Sears Craftsman Lawnmower, 6.0 Horsepower, 20in., Rear Bag, Good Condition. \$90 925-516-2331

GARAGE SALE, Saturday, June 26th, 3816 Loch Lomand Way, Livermore, 9:00am-2:00pm. 925-455-5985

(2) 16x20 drop in charcoal BBQ grills, came out of a brick BBQ unit. \$30.00 each. 209-836-1665

Small, portable/table-top TV. AC/DC with antenna. Works good. Perfect for car, boat, cabin. 10.00. 510-537-7222

GARAGE SALE:Friday, July 2, 1057 Mission Ridge Drive, Manteca. Childrens clothes, household items, toys. 925-846-3548

White stereo shelves, nice, \$10. 6 in. bench grinder on stand, \$25. Yakima roll-off rack for Kayak, \$25. 925-447-5221

Chinese Lantern, Pagoda Style, Hand carved granite, 8 parts, great garden piece, 68 inch height. \$700 obo. 925-449-3737

Transcriber, cassette, Panasonic RR-830. Has foot pedal & headset. Used about three times \$50.00 408-267-4304

Child items: Race car bed w/ mattress and bedding, blue, \$100. Changing table w/ draw/shelves, \$50, Costco wood train set w/ table/drawers, \$50 925-443-8585

CARDBOARD BOXES, STURDY for moving/storage:: 40 for \$50 925-447-7070

Plant Sale-Closing Nursery- Every Sat. Sun. 6/19-7/31-1 gal \$1.95, 5 gal \$7.95, 15 gal Shrubs \$24.95, 15 gal Trees \$29.95 925-240-6311

Garage Sale, June 26 8:00am, household items, Beanies, books, clothes, misc., 1383 Vancouver Way Livermore 925-443-1453

Hamilton 5 foot electric drafting table with Vernco V-track drafting machine. Ex. cond. Make offer. 209-538-4475

Moving Boxes. Lots of boxes available. Most used once, some twice, all in great shape. Several sizes. \$.75 each. Can bring to LAB. 925-513-4767

### MOTORCYCLES

1992 - RG200r Gamma two stoke sport bike.

For viewing ads on or off site. . .

Onsite: <https://www.ais.llnl.gov/newsline/ads/>  
Offsite: <http://www.llnl.gov/lnl/06news/employee.html>

209-599-1001, ext. 3-9615

Manteca - Need two drivers from Manteca, start point to be decided. Work time 6:00 to 2:45. 209-239-2812, ext. 3-2522

Modesto Denny's on Salida Blvd off Pelandale - Daves Luxury vanpool, captain seats, reading lights cellphone 8-4:45 ridership-based fares 209-576-7764, ext. 3-3194

Oakland - Seeking new ridership for Oakland-Montclair Vanpool. We are on the 9/80 schedule, lab hours 7:30am to 5:30pm. 510-569-7132, ext. 4-5173

Darville - driver/rider needed to complete four-person carpool. Diablo Road area. Work hours 8:15-5:00. 925-831-1569, ext. 2-9858

San Francisco - Looking to join a non-smoking carpool or vanpool as a rider only. Work hours are flexible. Contact James Davis. 415-648-7857, ext. 0-0000

Valley Springs - Car/vanpool - if carpool, will share driving. 209-772-0151, ext. 3-7709

### SERVICES

GARAGE SALE, Saturday, 6/26, at 695 Bourne Court, DANVILLE. 8 am - 1 pm. Lots and lots of good stuff! 925-648-0671

Great nanny--years experience w/ newborns, infants and pregnant women. Speaks both Chinese and English. Available July 1. 925-408-5537

SUPPORT GROUP for BETTER RELATIONSHIPS-personal/business! Codependents Anonymous (CoDA) Meets Tuesdays Noon T3520/R1174 Just come or call for Info 925-447-7070

Licensed Daycare available now in Livermore off East Ave. Excellent references. Accepting ages up to 18 months old. 925-443-2873

### SHARED HOUSING

Livermore - Furnished room with bath for rent on horse ranch, private entrance, pool privileges, util included. \$650/month 925-449-4869

LIVERMORE - Room for rent. 4 bdrm./3 bath house, in a nice area, 7 mi. from LLNL, Laundry/Kitchen Priv., share bath. \$550.00/mo, 1st/last req. 925-202-6923 or 925-373-0751

Livermore. - Furnished 4Bed/2Bath house to share. pool/hot tub/ built in BBQ. no smoking. \$675/mo + split utilities. 925-456-3331

Dublin - Room for rent in Dublin house. Shared bath. Full amenities. \$650/mnth + 1/3 utilities. Available now. Month to month 925-336-1576

### TRUCKS & TRAILERS

1972 - Starcraft tent trailer. Sleeps 5. New tires. Lightweight & clean. \$650. 925-846-3943

1995 - toyota tacoma sr5 4x4 xtra cab v6 130k loaded looks and runs great 2nd owner new tires & wheels dark blue other extras 10,500 o.b.o 209-833-0636

1998 - Beaver Patriot, 36ft., diesel pusher, very low miles, galley slide, fully loaded, must see! \$125,000 or best offer 510-886-7710

20 inch centerlines with tires like new off 2004 chevy truck full size 6 lug \$1,350.00 or best offer. 925-550-5981

1 Toyota Tundra factory alloy wheel for sale. Great for the spare so you can rotate all 5 tires. \$85 (cost over \$300 at dealer). 925-455-4528

### VACATION RENTALS

Newport Oregon - 2 bedroom,2 bath timeshare on the beach at an RCI Gold Crown resort. Available for the weeks of 8/27 > 9/3 & 9/3 > 9/10. \$900 per week. 925-449-0559

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, ocean-side pool, and BBQs. LLNL rates for year-round reservations. 925-449-0761

Gualala, Mendocino Co - 2 bedroom/2 bath with Stunning Whitewater Ocean views, Walking distance to downtown restaurants, shops, spa. Hot tub! Still available 7/4 weekend! 925-606-1845

### WANTED

Wanted: used computer for low income student. Will accept donated machine or pay \$100. Call 447-2076

Due to space limitations, *Newsline* may withhold ads that have already run. They will still appear on the Web.

## THUNDER

Continued from page 1

McCoy, also the department head for Integrated Computing and Communication, said Thunder is at work, running large science calculations, although the computer won't be fully operational for another month. He said stability problems are still evident in the file system and there are issues related to optimization of applications that point to the need for compiler improvements in partnership with Intel.

McCoy said Thunder is extremely cost-effective because it leverages the large industrial investment in chip and switch technologies. The Lab will be more responsible for maintaining the hardware and software environment than it has with systems that are fully integrated by vendors, such as IBM is with ASC/White.



Racks containing the fastest and most cost-effective super-computer in the country, Thunder.

BOB HIRSCHFELD/NEWSLINE

In addition to Thunder, several other LLNL super-computers or related efforts appear on the latest Top500 list, which was released this week.

Two prototypes of the upcoming BlueGene/L system are listed at 4 and 8. The Multiprogrammatic Capability Resource (MCR) computer is 12. ASC/White, as noted above, is 13. An unclassified system delivered under the ASC/Purple contract for file system devel-

opment and scientific computing, known as the ASC Linux Cluster (ALC) is 16, and Lilac, another Itanium-2 based IBM cluster is 17.

No. 1 on the Top500 list is Japan's Earth Simulator, whose LINPACK performance is rated as 35.8 teraflops.

McCoy noted that the degree of efficiency on LINPACK achieved by the Earth Simulator (88 percent) has only recently been approximated by any other system. Thunder achieved 87 percent. More typical efficiencies on this benchmark are in the 60 percent to 75 percent

range. As a point of reference the Earth Simulator, now more than two years old, costs approximately \$350 million. Thunder, with half the peak, costs approximately one-twentieth as much. The lower cost of these clustered, open source systems makes it possible to provide greater access to more scientists.

The complete list can be found at <http://www.top500.org>.

## DDLs

Continued from page 1

auditorium on Monday.

In a Director's Distinguished Lecture Series (DDLs) talk, Turner led his audience on a fast-paced, cosmic-level tour through some of the competing theories that attempt to account for the universal acceleration that appears to defy gravity — complete with whimsical slides, amusing asides, and a disarming lack of certainty about which theory, if any, may be the correct one.

"This is one of those wide-open problems. We actually don't have any really good ideas about why the universe is accelerating," Turner admitted. "We can't understand the destiny of our universe until we understand why it's accelerating."

That the universe is in fact accelerating now seems clear to most cosmologists, Turner said. Many recent observations and calculations have confirmed the initial discovery in 1998 that certain supernovae, or exploding stars, are farther away than they would have been if the universe had been expanding at a constant rate or decelerating.

The latest evidence came last month from images of 26 galaxy clusters taken by NASA's orbiting Chandra X-ray Observatory. By studying the hot gas in the clusters, which ranged from 1 billion to 8 billion years old, astronomers were able to determine that the universe slowed from its initial rapid expansion for several billion years and then began to accelerate again 5 billion or 6 billion years ago.

The Chandra studies also suggest that the density, or strength, of the unidentified dark energy that some scientists believe is responsible for the speedup may be constant — meaning the universe will continue to expand forever.

"We may not be able to see the rest of the universe in 100 billion years," Turner said, wryly noting that this could be a compelling argument for an immediate increase in federal funding for astronomy.

On the other hand, if the density of dark energy weakens over time, as other studies suggest, gravity could take over and the universe could collapse inward in a "big crunch" that would destroy all matter as we know it. Or, if the repulsive force grows stronger, eventually the galaxies, stars, planets and matter itself could be torn apart in a catastrophic "big rip."

In his General Theory of Relativity, Albert Einstein theorized in 1916 that space contains a density and pressure, called the "cosmological constant," that keeps the universe from collapsing in on itself. Einstein later repudiated his theory as inelegant and unnecessary after learning that the universe was actually expanding as a result of the primeval explosion that created space and time known as the "big bang."

In light of the new evidence that the cosmic expansion is accelerating, some researchers now believe that Einstein may have been right after all — that some kind of cosmic fluid known as dark energy fills the void of space, trumping gravity and driving the galaxies and stars apart at an ever-increasing pace.

"This is a very exciting time in cosmology," Turner said. "We have a real big-time puzzle, and we know that when we have big-time puzzles, that cracking the problem will require a crazy new idea — a big idea."

One such "crazy idea," proposed last year by Turner and some colleagues, is a new gravitational physics that takes effect as the density of the universe decreases. At some point, gravity turns around and becomes a repulsive force instead of an attractive one.

In general relativity, matter creates gravity by warping space-time, like a bowling ball on a trampoline, so that objects with mass tend to move toward each other. Turner's group added a "little twist" to Einstein's equations that could explain the initial inflation from which the universe emerged, the early period of deceleration when the cosmos was small and tightly packed, and the acceleration now occurring as the universe becomes more dilute.

"Although we think of gravity as always being attractive," Turner said, "within Einstein's theory is the possibility for it to be repulsive."

Another theory cited by Turner is based on quantum mechanics, which posits that the "quantum vacuum" of outer space, far from being empty, is filled with virtual particles that constantly wink in and out of existence, "living on borrowed time and borrowed energy."

"If there's an energy density associated with nothing," Turner said, "its gravity is very repulsive. If you try to add up how much nothing weighs, you get a very large number: infinity. If you use every trick in the theoretical tool box to try to bring it down to something interesting, you come very close to what you need to explain the universe accelerating."

The problem with this idea, Turner said — as well as with Einstein's cosmological constant, which has the same mathematical form — is that they yield too large a value to account for the current rate of cosmic acceleration.

Turner said two avenues of research in particular could produce progress toward an answer to the cosmic acceleration puzzle: "figuring out how much nothing weighs" through particle physics experiments; and determining the ratio of the pressure of dark energy to its energy density, a value known as the *W* parameter. He said several ongoing or planned experiments aimed at obtaining more precise estimates of the cosmic expansion rate — such as the studies of supernova explosions planned at the Lab's National Ignition Facility — could lead to a reasonably precise measurement of the *W* parameter within the next ten years.

"What's so interesting about (dark energy)," Turner said, "is that it appears to be at the nexus of a number of fundamental and interesting questions."

"That's the wonderful thing about science. You've got a bunch of interesting problems, a bunch of things that are plausibly related, and when that happens you know that when you make progress on one, there's a good chance you'll make progress on the others."

## SECURITY

Continued from page 1

some functions." During a Security Department all-hands meeting Thursday in the Bldg. 543 auditorium, Miller announced his changes will take effect July 1.

The most noticeable modification is a newly created program support manager, reporting to Miller's deputy, Michele Bergman. This manager will serve as primary security liaison to the University of California, program managers, and senior Laboratory management. He or she will monitor the UC contract security performance compliance, audits and inspections, and a host of other Security Department functions including ISSM and the Site Safeguards and Security Plan.

Pam Poco, currently Operations Security (OPSEC) program manager, will serve in an acting capacity until this position is posted and filled. According to Poco: "This will be an opportunity to help the Security Department interface with the programs. With

30 years of programmatic experience, I feel I can not only make a contribution, but also provide a fresh look in determining how the Program Support Office will be set up."

To realign and improve efficiencies in Physical Security, Miller merged the Alarms and Access Control group into the Physical and Technical Security Division. Leonard Semas continues to lead this group of technical specialists, most of whom are matrixed from Engineering and UTel.

The Threat Mitigation Assessment Group, responsible for developing and testing site-specific protection strategies, will report directly to Bergman, under the continued leadership of Jason Dufour. Dave Johnstone, Special Access Programs manager, also will report directly to Bergman on a need-to-know basis.

As part of strategic planning, the Security Department developed a Quality Management Plan for key operating processes. Assurance and Self-Assessment Manager Ray Ancira will oversee that Plan, in addition to his current ES&H, emergency preparedness and facility management responsibilities.

The associate department head position for Protective Forces and the Operations Manager position have been posted. A nation-wide recruiting effort has produced a number of qualified candidates who currently are in the interview process. Miller hopes to fill those positions very soon. The division leader for the Protective Forces continues to be Rick Certo in an acting capacity. Certo will return to his former position as division leader of the Personnel Security Division as soon as the positions are filled.

Another element of Miller's realignment creates a policy, procedures and assurance program within the Protective Force Division. Zeke Jacobson will lead that effort reporting directly to the division leader.

Project Manager Doug Sweeney will be assigned to the department office to manage all security project activities reporting directly to Miller.

And Dick Van Slyke, division leader of Physical and Technical Security Division, retires June 29, after nearly 20 years. When he leaves, Miller has named Paul Fink as acting division leader until the position is posted and filled.

# Delving beneath the surface of the Laboratory's 'lake'

Those who wander near the Central Cafeteria may happen upon a small "lake" officially called the Drainage Retention Basin. An unspectacular body of water, it's clear that this basin is not entirely natural. It accumulates and retains water, yet water cannot percolate into the soil beneath it; thick polymer liner lies under a foot or more of basin sediment to prevent any natural passage. The basin perimeter is mainly grouted "rip rap," — an engineered buffer — rather than a natural mosaic of riparian vegetation. Tributaries into the basin mainly consist of hoses from groundwater treatment units or concrete, manmade storm channels rather than meandering streams flowing over pebbles.

Yet, in this arid valley, an oasis of water no matter how simple or small creates quite the stir. If you have water, many will come; wildlife, plants and people. And in such stark environs, a basin constructed in 1991 for specific purposes (i.e., temporary detention of surface water flows during the wet season of up to 37 million gallons, support for the cleanup efforts of contaminated groundwater beneath the LLNL site and flood control) will have objectives that evolve over time. The basin still serves the purposes for which it was designed, yet it attracts others. Wildlife and plants established themselves in the basin, creating wetland habitats. These habitats, in turn, enhance the attractiveness of the basin.

In the midst of our urban environment, muskrats make their home within the basin from time-to-time, taking languid swims. Dawn or dusk affords glimpses of a handful of different birds (e.g., red-winged blackbirds, egrets, green herons, pied-billed grebes) that keep a vigilant eye on the shallows at the water's edge. Dragonflies with intricate designs (look close) and vibrant colors dip into the water's surface and dart through edge



By Jessie Coty



EPD WATER GUIDANCE AND MONITORING GROUP

**Top: Construction of the Drainage Retention Basin in 1991. The basin liner placement prevents the infiltration of water into the subsurface to facilitate efforts to treat and clean the groundwater beneath the LLNL site.**

**Bottom: The construction site of the new Terascale Facility overlooks the Drainage Retention Basin; note the grouted "rip rap" perimeter of the basin, which makes plant growth difficult.**



MICHAEL VAN HATTEM

**Top right: The intricately designed wings and vibrantly colored body of dragonflies are easily seen at the basin.**

**Center: The bullfrog is a non-native, invasive frog that also inhabits the basin, yet threatens the survival of the native and federally threatened California red-legged frog.**

**Bottom right: The federally threatened California red-legged frog is known to inhabit the basin.**

vegetation.

The LLNL community walks, runs, bikes, watches birds and other wildlife, or sits conversing near and around the basin. Protecting the basin is important (it helps meet environmental regulations) and difficult.

Game fish adversely impact the area's native California red-legged frogs, which are threatened with extinction and also inhabit the basin. Any

non-native species also disrupt the natural dynamics of the basin's ecosystem, which is a simple aquatic system compared to natural lakes, such as Lake Tahoe, and unable to easily adapt to changes.

Freestyle swimming laps across the breadth of the basin? In the rainy season, this four-acre basin collects water from approximately a quarter of the LLNL site and 700-900 acres of off-site horse and cattle ranchland.

This overland flow is not the relatively pristine water that gallops from a river's headwaters in Montana, but rather is a surface flow from an industrial, municipal, and agricultural area — not and ideal spot for swimming.

Use the basin as an alternative home for those pets or plants no longer wanted, such as goldfish or an abandoned

aquarium's vegetation? These caring gestures actually degrade the health of both species and the basin's ecosystem.

Not only is it ecologically detrimental to have non-native, invasive species introduced within the basin, these invasives



JENNIFER GARRISON



MICHAEL VAN HATTEM



further endanger the survival of the few native species already established. Finally, it is against federal and state laws to engage in acts that harm the California red-

legged frog. This means the simple act of placing your favorite non-native frog (e.g., bull frog) or game fish into the basin might be well-intentioned, but it's illegal.

So in this hot and arid environment, an artificially constructed basin becomes a natural and attractive facet of the LLNL site.

Got water? They'll come.

## Lab blood drive honored



JACQUELINE MCBRIDE/NEWSLINE

LLNL retirees Barbara Hill and Ben Mendoza, center, show the awards recently presented to the Lab by Red Cross Northern California Blood Services. Joining them were (left to right) Joni Schuld, Ron Hill, Jan Tulk, Fred Kloverstrom and Glenn Mara. The Lab was honored again this year as the top sponsoring organization for the Northern California region. In addition, LLNL retirees were honored as one of the top Red Cross blood drive volunteer groups.



Newsline

UC-LLNL

PO Box 808, L-797

Livermore, CA 94551-0808